



Table VII

Table VII: Class V ribozymes

Synth No.	RPI No.	Seq. ID No.	Ribozyme
19984	14880	1	gga guaA GA UAA CGU .GAA G Au cag gacB
19985	14881	2	gga guAA GA UAA CGU GAA G Au cag gacB
19120	14189	3	GGA GUA AGA UAA CGU GAA G AU CAG GAC
19986	14882	4	gga guAA GA UAA CGU GAA G AU cag gacB
19987	14883	5	gga guAA GA UAA CGU GAA G AU Cag gacB
19989	14885	6	gga gUAA GA UAA CGU GAA G AU CAg gacB
19988	14884	7	gga gUAA GA UAA CGU GAA G AU Cag gacB
19983	14879	8	gga guaA GA UAA CGU GAA G au cag gacB
20680	15305	9	gga guaA GA UAa CGU GAA G Au cag gacB
20685	15310	10	gga guaa GA UAA CGU GAA G Au cag gacB
20684	15309	11	gga guaA GA UAA CGU GAA G Au cag gacB
20674	15299	12	gga guaA GA UAA CGU GAa G Au cag gacB
20675	15300	13	gga guaA GA UAA CGU GaA G Au cag gacB
20681	15306	14	gga guaA GA UaA CGU gAA G Au cag gacB
20676	15301	15	gga guaA GA UAA CGU GAA G Au cag gacB
20673	15298	16	gga guaA GA UAA CGU GAA g Au cag gacB
20678	15303	17	gga guaA GA UAA CgU GAA G Au cag gacB
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20677	15302	20	gga guaA GA UAA CGu GAA G Au cag gacB
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20686	15311	22	gga guaa ga uaa cgu gaa g Au cag gacB
21422	15705	23	gga guaa gA Uaa CGU gaa G Au cag gacB
21577	15702	24	gga guaa ga Uaa CGU gaa G Au cag gacB
21417	15700	25	gga guaa ga Uaa CgU gaa g Au cag gacB
21418	15701	26	gga guaa ga Uaa CGU gaa g Au cag gacB
21420	15703	27	gga guaa ga Uaa cgU gaa g Au cag gacB
22128	16188	28	gga guaa gA U _S 2aa CGU gaa G Au cag gacB
22131	16191	29	gga guaa gA Uaa <u>CGU</u> gaa G Au cag gacB
22137	16197	30	gga guaa gA Uaa <u>CGU</u> gaa G Au cag gacB
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22135	16195	35	gga guaa gA Uaa <u>CGU</u> gaa G Au cag gacB
22138	16198	36	gga guaa gA Uaa CGU gaa G Au cag gacB
22130	16190	37	gga guaa gA <u>U</u> aa CGU gaa G Au cag gacB
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Table VII

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23789	17587	43	gga guaa ga U _S aa cGU gaa G Au cag gacB
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U, C = 2'-deoxy-2'-fluoro Uridine, Cytidine

U, C = 2'-deoxy Uridine, Cytidine

U, C = 2'-deoxy-2'-amino Uridine, Cytidine

UPPER CASE = RIBO

lower case = 2'-O-Methyl

S = phosphorothioate linkage

S2 = phosphorodithioate linkage

B = 3',3'-inverted deoxyabasic moiety

Table VIII

Class I

	10	20	30	40	
wild type:	AUGCAAUGCAUUUGAGAACUGUAAGUUGUAUGAGGGCAUG				(SEQ ID NO 48)
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2	U.....C.....A.....U...AG..				(SEQ ID NO 50)
3	G.....U.....UG..				(SEQ ID NO 51)
4C.....A.A.....AG..				(SEQ ID NO 52)
5U..G.....G.....A.....				(SEQ ID NO 53)
6	G.....G.....U...U...				(SEQ ID NO 54)
7	...U.....CA.....U.....				(SEQ ID NO 55)
9	.....U.....C.....C.....				(SEQ ID NO 56)
10	.....C.....G..				(SEQ ID NO 57)
11	...G.G.....UC.....				(SEQ ID NO 58)
12	....U...C.....G...A...C...G.....G.				* (SEQ ID NO 59)
16	G.....G.....U.....A				(SEQ ID NO 60)
17	...U.....AG.....G...C.				(SEQ ID NO 61)
18	....G..G.....C.....G.				(SEQ ID NO 62)
19	G.....				(SEQ ID NO 63)
21	..A.....G.....G.				(SEQ ID NO 64)
22	G.....A.....U				(SEQ ID NO 65)
23	G.....A.....U...U...				(SEQ ID NO 66)

Class II

	10	20	30	40	
wild type:	GGCGAUAGGUGAGUACACUGGGUCGGAGGGAUAGCUAGGU				(SEQ ID NO 67)
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2'A.....A				(SEQ ID NO 69)
3'C.....				(SEQ ID NO 70)
2A.....A.....				(SEQ ID NO 71)
3A.....				(SEQ ID NO 72)
7A..G.....GG....				(SEQ ID NO 73)
8A.....A.....				(SEQ ID NO 74)
9	.....A.....ACA				(SEQ ID NO 75)
21	.....G.....U.....UC				(SEQ ID NO 76)
24	.....A.....CG.....C				(SEQ ID NO 77)
26	.....GU...				(SEQ ID NO 78)
29C.....UU.....A.C				(SEQ ID NO 79)
30U.....C.				(SEQ ID NO 80)
31U.G....				(SEQ ID NO 81)
34G...GA..A.				(SEQ ID NO 82)

Class V

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2C.....U.....				(SEQ ID NO 84)
3U..G.....U..				(SEQ ID NO 85)
5	U...U...C.....G.....A.....				(SEQ ID NO 86)
6C.....A.....AC.....U.C.				(SEQ ID NO 87)
7	...G..U.....U..				(SEQ ID NO 88)
9C.....U...				(SEQ ID NO 89)
10	.A.....A.....U...U...U..				(SEQ ID NO 90)
11	...U..UU.....C.C..				(SEQ ID NO 91)
12C.....A.....U..U				(SEQ ID NO 92)
13A.....U..C...				(SEQ ID NO 93)
14A.U.UA.G				(SEQ ID NO 94)
17	.A.....C..U.				(SEQ ID NO 95)
19C..				(SEQ ID NO 96)



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Breaker, Ronald
Beigelman, Leo

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 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 74
 ggcgauaagu gagaacacug ggucggaggg auagcuaggu 40

 <210> 75
 <211> 40
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 75
 ggcgauaggu gaauacacug ggucggaggg auagcuaaca 40

<210> 76
 <211> 40
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 76
 ggcgauaggu gagugcacug ggucggaggg auugcuaguc 40

<210> 77
 <211> 40
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 77
 ggcgauaggu gaauacacug ggucggaggg acggcuaggc 40

<210> 78
 <211> 40
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 78
 ggcgauaggu gaguacacug ggucggaggg auagcguggu 40

<210> 79
 <211> 40
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 79
 ggcgacaggu guuuacacug ggucggaggg auagcuaagc 40

<210> 80
 <211> 40
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 80
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 <210> 81
 <211> 40
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 81
 ggcgauaggu gaguacacug ggucggaggg auaucgaggu 40

 <210> 82
 <211> 40
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 82
 ggcgauaggu gaguacacug ggucggaggg guaggaagau 40

 <210> 83
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 83
 ggcucguggg gagugagaua acgugaagau cuagggcggg gga 43

 <210> 84
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 84
 ggcucgugcg gagugagaua acgugaagau cuagggcugg gga 43

 <210> 85

<211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 85
 ggcucguugg gggugagaua acgugaagau cuagggcggg uga 43

 <210> 86
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 86
 ugcugugcg gagugagaua acgugaagau cgagggcgagg gga 43

 <210> 87
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 87
 ggcucgugcg gaguaagaua acgugaagau cacgggcggg gca 43

 <210> 88
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 88
 ggcugguugg gagugagaua acgugaagau cuagggcggg uga 43

 <210> 89
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 89
 ggcucgcggg gagugagaua acgugaagau cuagggcggu gga 43

<210> 90
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 90
 gacucguggg gaguaagaua acgugaagau cuagggcugg uga 43

 <210> 91
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 91
 ggcuuguuug gagugagaua acgugaagau cuagggcgcg cga 43

 <210> 92
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 92
 ggcucguggc gagugagaua acgugaagau auagggcggu ggu 43

 <210> 93
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 93
 ggcucguggg gaguaagaua acgugaagau cuaggguggc gga 43

 <210> 94
 <211> 43
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 94
 ggcucguggg gagugagaua acgugaagau cuaggacugu agg 43

<210> 95
 <211> 43
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 95
 gacucguggg gagugagaua acgugaagau cuagggcgcg gua 43

<210> 96
 <211> 43
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 96
 ggcucguggg gagugagaua acgugaagau cuagggcggg cga 43

<210> 97
 <211> 15
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 97
 agauaacgug aagau 15

<210> 98
 <211> 18
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 98
 aauggccuau cggugcga 18

<210> 99
 <211> 42
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Nucleic Acid Primer

<400> 99
 gaaataaaact cgcttggagt aaccatcagg acagcgaccg ta 42

<210> 100
 <211> 90
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Nucleic Acid Template

<220>
 <221> misc_feature
 <222> (35)..(74)
 <223> n stands for any a, c, g, or u

<400> 100
 tctaatacga ctactatag gaagacgtag ccaannnnnn nnnnnnnnnn nnnnnnnnnn 60
 nnnnnnnnnn nnnntacggt cgctgtcctg 90

<210> 101
 <211> 38
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Nucleic Acid Primer

<400> 101
 gaattctaatacga actcact ataggaagac gtagccaa 38

<210> 102
 <211> 97
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<220>
 <221> misc_feature
 <222> (16)..(55)
 <223> n stands for any a, c, g, or u

<400> 102
 ggaagacgua gccaanannnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnuacgg 60
 ucgcuguccu gaugguuacu ccaagcgagu uuauuug 97

<210> 103
 <211> 21
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Nucleic Acid Substrate

 <400> 103
 guccugaugg uuacuccaag c 21

 <210> 104
 <211> 46
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 104
 gguagccaag ugcaaugcac uugagaacug uaaguuguau uagggc 46

 <210> 105
 <211> 44
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 105
 gguagccaag gcgauaagug aguacacugg gucggagggg uagc 44

 <210> 106
 <211> 45
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 106
 gguagccaag ggcguggcac aagcguugcu gaucggaagg gacag 45

 <210> 107
 <211> 29
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 107
 gguagccaau ggccuauagg ugagaggac 29

<210> 108
 <211> 28
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 108
 ggaguaagau aacgugaaga ucuaggac 28

<210> 109
 <211> 61
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 109
 ggaguaagcau cccugagau gggguagag cgaauagggu cgcuguccug augguuacuc 60

c 61

<210> 110
 <211> 13
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 110
 cuuguggcgc guc 13

<210> 111
 <211> 49
 <212> RNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 111
 ggaagacgua gccaaggugc ugaggagagu guuuaggca cuguaggac 49

<210> 112
 <211> 37
 <212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 112

ggcuuggagc ugaagaggaa ucaaaccgga aaacuac

37

<210> 113

<211> 50

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 113

ggaagacacg uagccaaaca guaggcuaug gagauccgga aagagcggau

50

<210> 114

<211> 30

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 114

gcuuggagcc ggugggugca uagucaggac

30

<210> 115

<211> 35

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 115

ggcuuggagu guggcgauuc agaucggagu uggac

35

<210> 116

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 116

gaugguuacu ccaagcg

17

<210> 117
 <211> 39
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 117
 ggaguaaccg uucgcgagag ccuaagcug uaucaggac 39

 <210> 118
 <211> 17
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Nucleic Acid Substrate

 <400> 118
 agacgaaugg ucagacg 17

 <210> 119
 <211> 17
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Nucleic Acid Substrate

 <400> 119
 cacguuaugg cucaacg 17

 <210> 120
 <211> 27
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 120
 caaugugaau ugagagccuu aagcugu 27

 <210> 121
 <211> 47
 <212> RNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Enzymatic Nucleic Acid

 <400> 121

ggagacguag ccaaggucug cggagagugu guuaggcacu guaggac

47

<210> 122

<211> 30

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 122

gcuuggagcu gaggagaugu ucgaaaacca

30

<210> 123

<211> 96

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 123

ggaagacgua gccaauguga auugagagcc uuaagcugua ucagagagug uacauacggu

60

cgcuguccug augguuacuc caagcgaguu uauuug

96

<210> 124

<211> 43

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<400> 124

ggaguagcca augugaauug agagccuuaa gcuguaucag gac

43

<210> 125

<211> 17

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Nucleic Acid Substrate

<400> 125

guccugaugg uuacucc

17

<210> 126

<211> 27

<212> RNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Enzymatic Nucleic Acid

<220>

<221> misc_feature

<222> (1)..(6)

<223> 2'-O-Methyl

<220>

<221> misc_feature

<222> (21)..(27)

<223> 2'-O-Methyl

<400> 126

ggaguaagau aacgugaaga ucaggac

27